Table A.4.1. East Yard SWMU 8 Summary of Boring Log and Analytical Data

Boring/ Date/ Report	Total Depth of Boring	Depth to Water[1]	Lithologic Description[2] (Observation Notes)	Maximum PID Response, ppm_v (Depth)	Sample Type[3]	Sample ID (Depth)	Analyses[4]	COC Concentrations greater than Delineation Criteria
S1419 1/15/03 Full RFI 2nd Iter. SWMU 8	12	8?	Fill: 0-11 (red pulverized brick at 2-4; grayish brown stained, few glass fragments and catalyst beads at 5.5-6; red pulverized brick, minor black staining, water exhibits low viscosity, black LNAPL film, fly ash at 7.5-9) Clay and Peat: 11-12	47 (6.5-7)	P, U, F	S1419A3 (1-1.5)	BTEX, TOL	TOL: <2.4 mg/kg
					P, U, F	S1419D2 (6.5-7)	BTEX, TOL	**Benzene: 1.8 mg/kg** TOL: <2.6 mg/kg
					P, S, F	S1419F2 (10.5-11)	BTEX, TOL	TOL: <2.3 mg/kg
S1418 1/15/03 Full RFI 2nd Iter. SWMU 8	12	5	Fill: 0-11 (black staining pulverized brick at 5-6; black staining at 6-6.5; fly ash at 6.5-8) Peat: 11-12	121 (7-7.5)	P, U, F	S1418A4 (1.5-2)	BTEX, PAHs, TOL	TOL: <2.6 mg/kg
					P,S, F	S1418D3 (7-7.5)	BTEX, PAHs, TOL	***Benzene: 1.7 mg/kg*** *(Impact toGroundwater—not applicable)* Benzo(a)anthracene: <2.2 mg/kg **Benzo(a)pyrene: <2.2 mg/kg** Benzo(b)fluoranthene: <2.2 mg/kg Benzo(k)fluoranthene: < 2.2 mg/kg Dibenzo(a,h)anthracene: <2.2 mg/kg Indeno(1,2,3-cd)pyrene: <2.2 mg/kg TOL: <2.5 mg/kg
					P, S, F	S1418F2 (10.5-11)	BTEX, PAHs, TOL	TOL: <2.3 mg/kg
S1417 1/16/03 Full RFI 2nd Iter. SWMU 8	20	9?	Fill: 0-11 (thin black staining at 2-2.5; fly ash, very minor sheen on water surface at 5-6) Clay and Peat: 11-20	230 (5-5.5)	P, U, F	S1417A4 (1-1.5)	BTEX, PAHs, Pb, TOL	TOL: <2.2 mg/kg
					P, U, F	S1417C3 (5-5.5)	BTEX, PAHs, Pb, TOL	**Benzene: 6.6 mg/kg** TOL: <2.8 mg/kg
					P, S, F	S1417F2 (10.5-11)	BTEX, PAHs, Pb TOL	TOL: <2.4 mg/kg

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S1416 1/15/03 Full RFI 2nd Iter. SWMU 8	12	3?	Fill: 0-10 (black stained red pulverized brick at 2-3; black saturated sand at 3-4) Peat: 10-12	109 (2-3)	P, U, F	S1416A4 (1.5-2)	BTEX, Pb TOL	TOL: <2.2 mg/kg
					P, U, F	S1416B2 (2.5-3)	BTEX, Pb, TOL	**Benzene: 5 mg/kg** TOL: <2.5 mg/kg
					P, S, F	S1416D1 (6-6.5)	BTEX, Pb TOL	TOL: <2.3 mg/kg
S1415 1/16/03 Full RFI 2nd Iter. SWMU 8	16	8?	Fill: 0-13.5 (flyash, thin black LNAPL film on water surface at 8-10; tin seam red brick fragments at 9.5-10) Clay and Peat: 13.5-16	696 (5-5.5)	O, U, F	S1415A4 (1.5-2)	BTEX, Pb, TOL	Lead: 1190 mg/kg TOL: <2.2 mg/kg
					O, U, F	S1415C3 (5-5.5)	BTEX, Pb, TOL	**Benzene: 5.3 mg/kg** Lead: 19200 mg/kg TOL: 220 mg/kg
					O, S, F	S1415F4 (11.5-12)	BTEX, Pb, TOL	TOL: <2.3 mg/kg
S0830 (MW132) 8/20/02 Full RFI SWMU 8	16	5.2	Fill: 0-9 (strong fumes at 6-10) Clay and Sand: 9-15 (product-like material at 9-11) Peat: 15-16	1400 (7-7.5)	O, U, F	S0830A4 (1.5-2)	V, S, Pb, TOL	Lead: 1940 mg/kg
					O, S, F	S0830D3 (7-7.5)	V, S, Pb, TOL, SPLP-Pb, Phys. Char.	***Benzene: 1.3 mg/kg*** *(Impact to Groundwater—not applicable)* **Benzo(a)pyrene: 0.77J mg/kg** Lead: 91900 mg/kg TOL: 43.1 mg/kg SPLP Lead: 0.68 mg/L
					O, S, N	S0830H4 (15.5-16)	V, S, Pb, TOL	Lead: 15900 mg/kg TOL: 13.2JB mg/kg

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					Water	MW132 11/14/02	V, S, M, water quality	1,4-Dichlorobenzene: 250 ug/L **Benzene: 700 ug/L** Chlorobenzene: 580 ug/L Methylcyclohexane: 100 ug/L MTBE: 150 ug/L 2-4-Dimethylphenol: 160JX ug/L 2-Methylnaphthalene: 180 ug/L Bis(2-ethylhexyl)phthalate: 170 ug/L Naphthalene: 310 ug/L Unknown TICS > 100 ug/L Arsenic: 37 ug/L Lead: 172 ug/L
S0829 8/8/02 Full RFI SWMU 8	21	6?	Fill: 0-13 (black stained, NAPL oil like at 6-8; black stained clay, then sand, product like odor at 8-9) Clay and Peat: 13-21 (H_2S as high as 60 ppm)	1800 (7-8)	O, U, F	S0829A4 (1.5-2)	V, S, M, TOL	Iron: 25500 mg/kg Lead: 3210 mg/kg TOL: 2.9 mg/kg
					O, U, F	S0829D3 (7-7.5)	V, S, Pb, TOL	**Benzene: 40 mg/kg** Cyclohexane: 150 mg/kg Ethylbenzene: 170 mg/kg Hexane: 140 mg/kg Xylene: 810 mg/kg Lead: 2020 mg/kg TOL: 69.6 mg/kg
					O, S, N	S0829J4 (19.5-20)	V, S, Pb, TOL	None
S0828 8/8/02 Full RFI SWMU 8	15	5.5	Fill: 0-14 (dark brown LNAPL film at 8-9) Peat: 14-16	254 (9-10)	O, U, F	S0828A2/A3 (0.5-1)	V, S, Pb, TOL	None
					O, S, F	S0828E2/E3 (8.5-9)	V, S, Pb, TOL, SPLP Pb, Phys. Char.	***Benzene: 1.4 mg/kg*** *(Impact to Groundwater—not applicable)*
					O, S, N	S0828H1 (14-14.5)	V, S, Pb, TOL	None
S0827 8/13/02 Full RFI SWMU 8	24	3.5	Fill: 0-12 (black stained sand at 1-2 and 3.56; slight product like odor at 3.5-6)	1000 (17.5-18)	O, U, F	S0827A3/A4 (1-2)	V, S, Pb, TOL	**Benzo(a)pyrene: 0.68 mg/kg** TOL: 125 mg/kg

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			Clay and Peat: 12-15 Clay: 15-24		O, S, F	S0827C2 (4.5-5)	V, S, Pb, TOL	***Benzene: 2 mg/kg*** *(Impact to Groundwater—not applicable)* Bis(2ethylhexyl) phthalate: 1300 mg/kg
					O, S, N	S0827L4 (23.5-24)	V, S, Pb, TOL	**Benzo(a)pyrene: 0.83 mg/kg**
S0826 8/13/02 Full RFI AOC 6C	20	8	Fill: 0-12.5? (black tar like LNAPL at 3.9; LNAPL sheen at 8.5-9) Peat: 12.5-13? Clay: 13-20	200 (9-10)	P, U, F	S0826A4 (1.5-2)	V, S, M	Iron: 29900 mg/kg
					P, S, F	S0826E2 (8.5-9)	V, S, M	None
					P, S, N	S0826H1 (14-14.5)	V, S, M	Iron: 42900 mg/kg
A6CTP1 (S0861) 9/30/02 full RFI AOC 6C	14	6	Fill: 0-14 (black fragments at 1-3) Peat: 14	1 (12)	P, U, F	S0861A4 (1.5-2)	V, S, M	Arsenic: 26.3 mg/kg Iron: 38500 mg/kg
					P, U, F	S0861C4 (5.5-6)	V, S, M	Iron: 47900 mg/kg
					P, S, N	S0861 H3 (15-15.5)	V, S, M	Iron: 47600 mg/kg
HP0103 9/9/97 1st Groundwater SWMU 8	10	5	See SB0076	420	Water	HP0103	V, S, Pb	1,4Dichlorobenzene: 88 ug/l **Benzene: 69 ug/l** Benzenethiol: 16 ug/l Chlorobenzene: 1100 ug/l Lead: 839 ug/l
HP0117 9/17/97 1st Groundwater AOC6C	12	8.5	See SB0180	0	Water	HP0117A	V, S, M	Benzene: 6 ug/L Antimony: 29.5 ug/L Arsenic: 208 ug/L Chromium: 204 ug/L Lead: 997 ug/L Nickel: 157 ug/L Vanadium: 229 ug/L
SB0236 6/21/96 1st Soils SWMU 8	12	4	Fill : 0-10.5 (tr catalyst beads at 2-5; petroleum odor and staining at 4.5-6; petroleum odor at 6-8) Meadow mat: 11-12	40 (4-6)	O, S, F	SB0236SC (4-6)	V, S, Pb, TEL	None

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SB0235 6/21/96 1st Soils SWMU 8	12	6	Fill : 0-12 (petroleum staining at 4-6; Petroleum odor at 6-8.5; petroleum odor, black staining at 10-11	0	O, S, F	SB0235SF (10-12)	Pb, TEL	None
SB0234 6/21/96 1st Soils SWMU 8	14	6	Fill : 0-14 (petroleum odor at 8-10.5) Meadow mat: 14	7 (8-10)	O, S, F	SB0234SE (8- 10)	Pb, TEL	None
SB0233 6/21/96 1st Soils SWMU 8	14	4	Fill : 0-14 (petroleum odor at 9-11.4, staining at 9-10; petroleum odor, black staining at 14-14.3) Peat: 14	145 (8-10)	O, S, F	SB0233SF (10-12)	V, S, Pb, TEL	None
SB0232 6/21/96 1st Soils SWMU 8	12	3.8	Fill : 0-12 (petroleum odor at 5.5-10.4)	273 (4-6)	O, S, F	SB0232SC (4-6)	Pb, TEL	None
SB0231 6/21/96 1st Soils SWMU 8	12	4	Fill : 0-11.5: Meadow mat: 11.5-12 (black)	0	O, U, F	SB0231SB (2-4)	V, S, Pb, TEL	None
SB0207 4/12/96 1stGroundwater SWMU 25	12	6.5	Fill : 0-9.6 Silt and clay, little peat: 9.6-12	0	P, S, F	SB0207SE (8-10)	Pb, TEL	None
SB0202 4/12/96 1st Soils SWMU 25	12	6	Fill : 0-10 (catalyst beads; black staining at 2.2-4) Peat: 10	0	O, S, F	SB0202SE (8-10)	V, S, Pb, TEL	None
SB0076 11/16/95 1st Soils SWMU8	8	6	Fill : 0-8	250 (6-8)	O, S, F	SB0076SD (6-8)	V, S, Pb, TEL	**Benzene: 750 mg/kg** Benzenethiol: 90E mg/kg *Ethylbenzene: 410 mg/kg (Impact to Groundwater—not applicable)* Toluene: 2400 mg/kg Xylenes: 2300 mg/kg *2,4-Dimethylphenol: 250E mg/kg (Impact to Groundwater—not applicable)* **Benzo (a)pyrene: 0.94 mg/kg** *Naphthalene: 180E mg/kg (Impact to Groundwater—not applicable)* Lead: 145000 NE mg/kg TEL: 2400 mg/kg

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U008010 11/15/95 1st Soils SWMU 8	8	6	Fill : 0-8 (gray to black staining at 2-4; petroleum on tip of spoon at 4-6)	48 (2-4)	None			
B32 10/7/91 DOCC (App. S) AOC 6C					O	B32 (10.5-11)	TPH, V, S, M	TPH: 2700 mg/kg
					O	B32 (14.5-15)	TPH	None
					O	B32 (19.5-20)	TPH	None
SB-15 8/15/91 D. Raviv, DOCC	12	4.79			Water	SB15 (1/6/03)	V, S, M, water quality	None

NOTES:

Benzene and benzo(a)pyrene are highlighted in bold because they are indicator constituents of concern (COCs)

Shaded rows indicate samples collected from nearby SWMUs/AOCs

ppm_v = parts per million (volume basis)

All depths referenced on this summary table are in feet below the ground surface.

PID = Photoionization detector.

ID = Identifier.

mg/kg = milligrams per kilogram (equivalent to parts per million).

µg/L = micrograms per liter (equivalent to parts per million).

[1]Depth to water as observed during borehole advancement.

[2]"Fill" encountered within the completed borings was characteristically described as an asphalt layer (typical) underlain by a heterogeneous gravel to clay mixture of unconsolidated materials, ranging in color from tan to gray with occasional construction debris (e.g., brick) present. In some locations, the fill material is further characterized by containing a slag or beaded material, in which case it is noted within the table. Also noted on the table are any other olfactory or visual observations that indicate potential petroleum-type impacts within the fill unit were observed.

[3]P – property boundary, O – on-site, U – unsaturated, S – saturated, F – fill, N – native. "None" indicates that no sample was collected.

[4]V – VOCs, S – SVOCs, M – metals, Pb – lead, TOL – total organic lead, TEL – tetraethyl lead, TPH – Total Petroleum Hydrocarbons; SPLP -- Synthetic Precipitation Leaching Procedure; -Phys. Char. -- physical characteristics.